



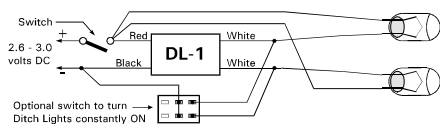
Electronics for Model Railroads

DL-1 Oscillating Ditch Lights

The CIRCUITRON Ditch Lights require a 2.6 - 3.0 volt DC power source for proper operation. This can be supplied by two 1.5 volt *ALKALINE* batteries in series or by using a CIRCUITRON **TP-2** or **TP-3** Track Power Adapter. Due to the high intensity of the special lamps, the current drawn by the **DL-1** is high and battery life of 2 AA cells will be only a few hours of continuous operation. Battery operation is best accomplished by installation in a 'dummy' locomotive due to the battery size.

1) Mount the lamps by drilling a hole through the center of the model's ditch light castings large enough so that the lamp fits easily in the hole. Fix the lamp's position with a tiny spot of RTV and allow to set. *To allow for eventual replacement, do not use ACC or epoxy.*

2) Connect the electronics module to the lamps and a 3 volt power source as shown below. **WARNING: Do not connect directly to track power!** A switch such as the CIRCUITRON **RS-1** or **RS-2** or a miniature toggle or slide switch may be connected as shown to turn the Ditch Lights off. This switch is not necessary when powering the **DL-1** from a track power adapter. A DPST or DPDT switch may be connected as shown if you wish to be able to turn both lamps constantly "ON".



NOTE: This drawing shows the hookup for a battery installation. If you are using the **TP-2** Track Power Adapter, follow the directions included with it and note that the **DL-1** connects exactly the same as the **ML-1**. If you are using the **TP-3** Track Power Adapter, the connections are the same as for battery operation.

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